

BELLCOMM, INC.

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869 03080

SUBJECT: Trip Report - Discussion of
F-4 Tip Tank Fabrication
Case 105-3

DATE: March 20, 1969

FROM: A. S. Kiersarsky

MEMORANDUM FOR FILE

The writer visited with Glen Whitaker, Assistant Sales Manager and Donald Woodward, Engineer, of the Sargent-Fletcher Company, El Monte, California, on February 14, 1969 to discuss production of aircraft tip tanks.

Sargent-Fletcher is currently contracted to the USAF to fabricate tip tanks for the F-4 aircraft. This tank (Figure 1) was originally designed and fabricated by the McDonnell Douglas Co. in St. Louis, Missouri. At a meeting with McDonnell Douglas in November, they stated that this tank is presently being produced at \$11 per pound whereas the original cost was \$150 per pound.

As background for low cost transportation studies presently being conducted for the space program, this discussion with the Sargent-Fletcher Co. was held to get a better understanding of the fabrication and test operations, and other factors which may have impact on the cost of aircraft tip tanks.

Sargent-Fletcher stated that aircraft tip tanks, a highly competitive business, is the only product of this firm and discussion of cost was proprietary. As such they would neither confirm or deny the cost quoted by the McDonnell Douglas Co. Nevertheless, they did discuss some of the factors which they feel have an impact on cost. Highlights of this discussion are noted below.

Production Rate - The tip tanks are currently being produced at the rate of 50 to 55 units per day, whereas prior to the bombing halt in Vietnam the production rate was approximately 150 per day. They stated that this is a very significant factor for costs.

Company Overhead - The overhead required to produce the tip tanks is very low since they are primarily a fabricator and therefore such factors as engineering R&D and others are kept to a minimum. The small engineering staff functions primarily in a liaison effort.

(CATEGORY)

(NASA CR OR TMX OR AD NUMBER)

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ASA-CR-103956) TRIP REPORT - DISCUSSION
TIP TANK FABRICATION (Bellcomm, Inc.)

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Manufacturing Costs - Sargent-Fletcher stated that the high rate of production, where fabrication operations are highly automated, repetitive, and consecutive is very adaptive to lower skilled labor. The majority of the shop force is low skilled since their primary function is to feed raw material to the machines and then remove the fabricated part. They indicated that for this tip tank their initial production rate was low and the learning curve flattened out at about the 150th production unit.

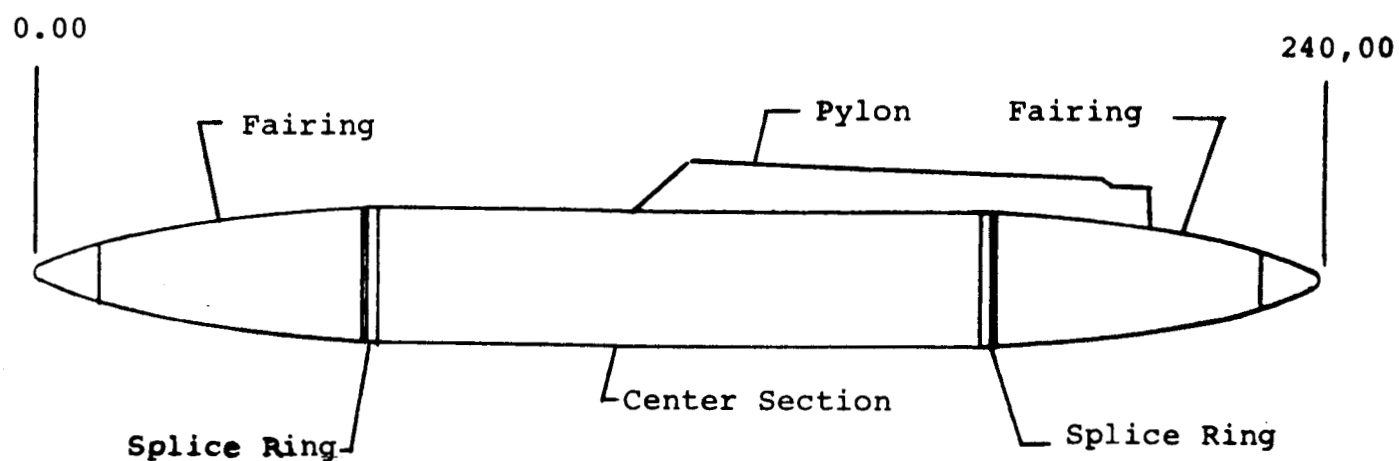
Material - Since the rate of production is high and the use of material substantial, raw material is used in the as-rolled coil form instead of standard size sheets, thereby reducing handling costs as well as facilitating production. Another factor is the maximum use of raw material in the partially fabricated form such as extruded shapes, castings, etc.

A. S. Kiersarsky

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Attachments



Customer -- USAF
Applicable Aircraft -- F4C
Installation -- Pylon, underwing
Material -- Aluminum
Weight -- 294 lbs
Major Diameter - 25.50 inches
Total Length -- 240.00 inches

Figure 1 - Aircraft Wing Tip Tank -- Jettisonable

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